

FIG. 1

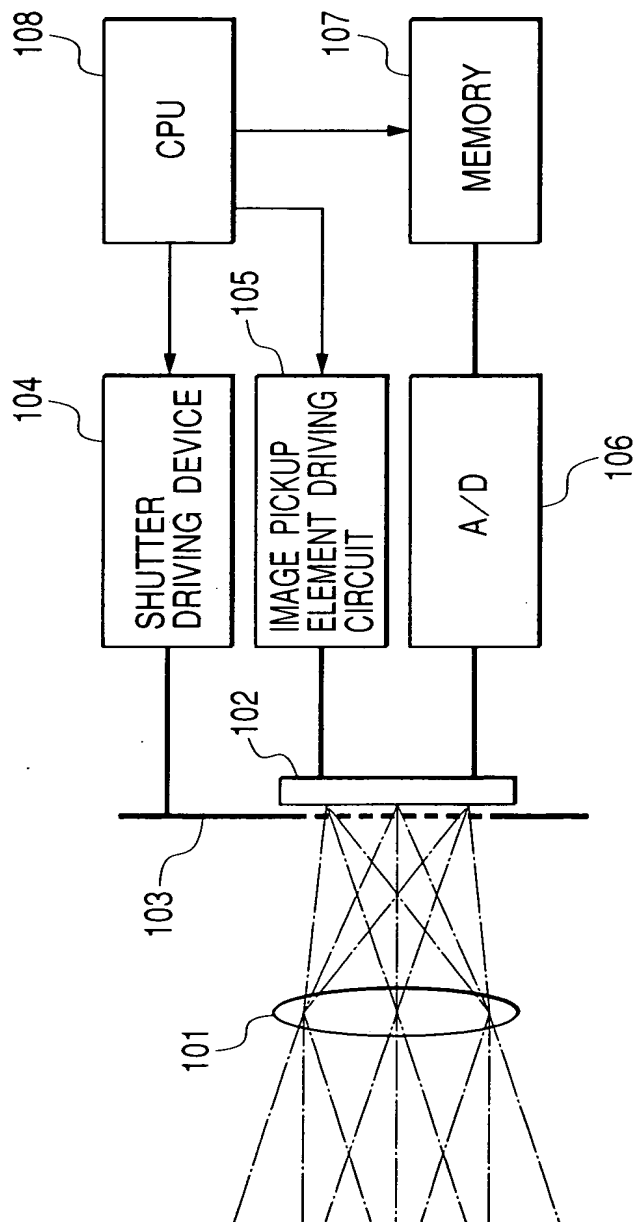


FIG. 2

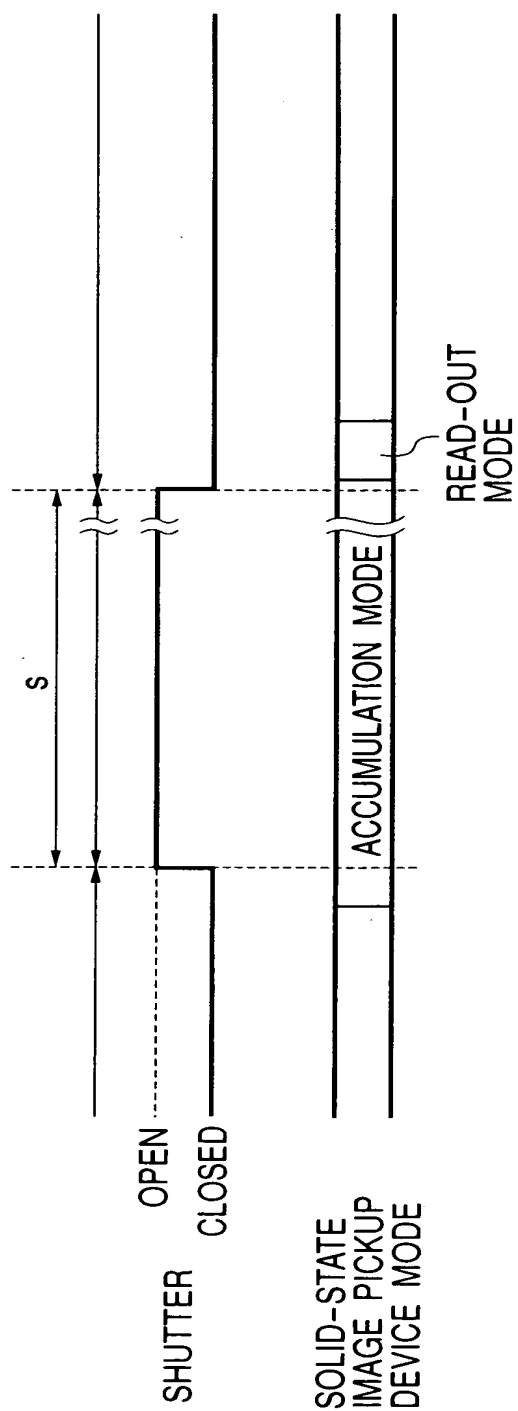


FIG. 3

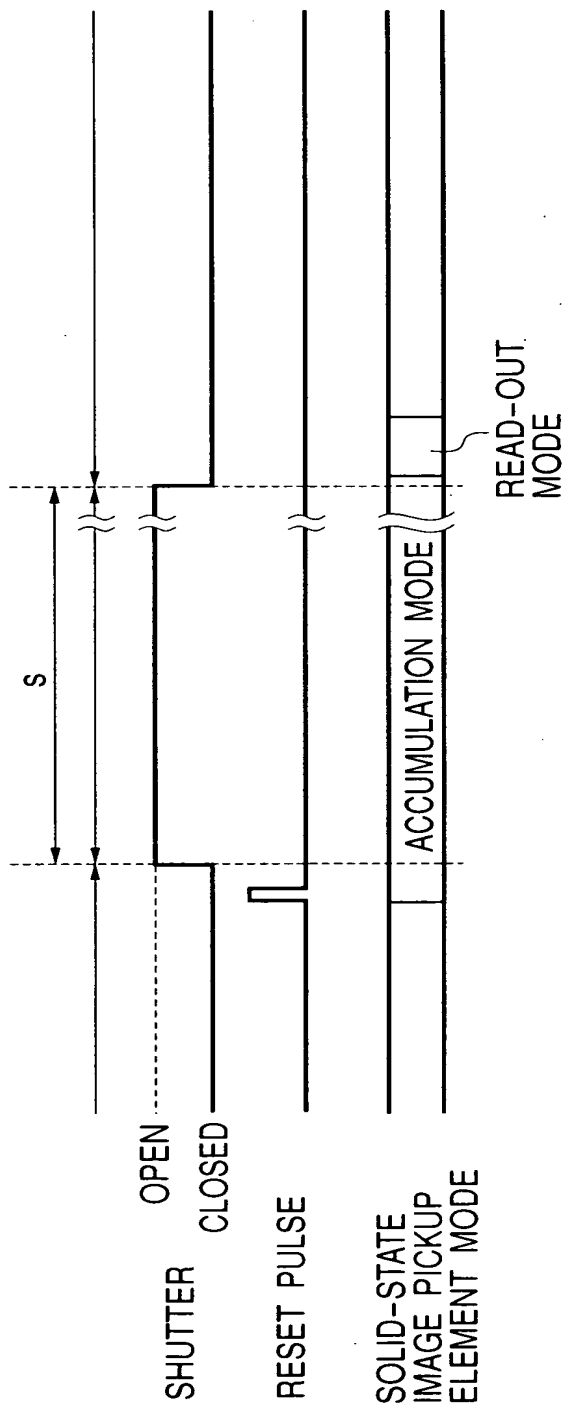


FIG. 4

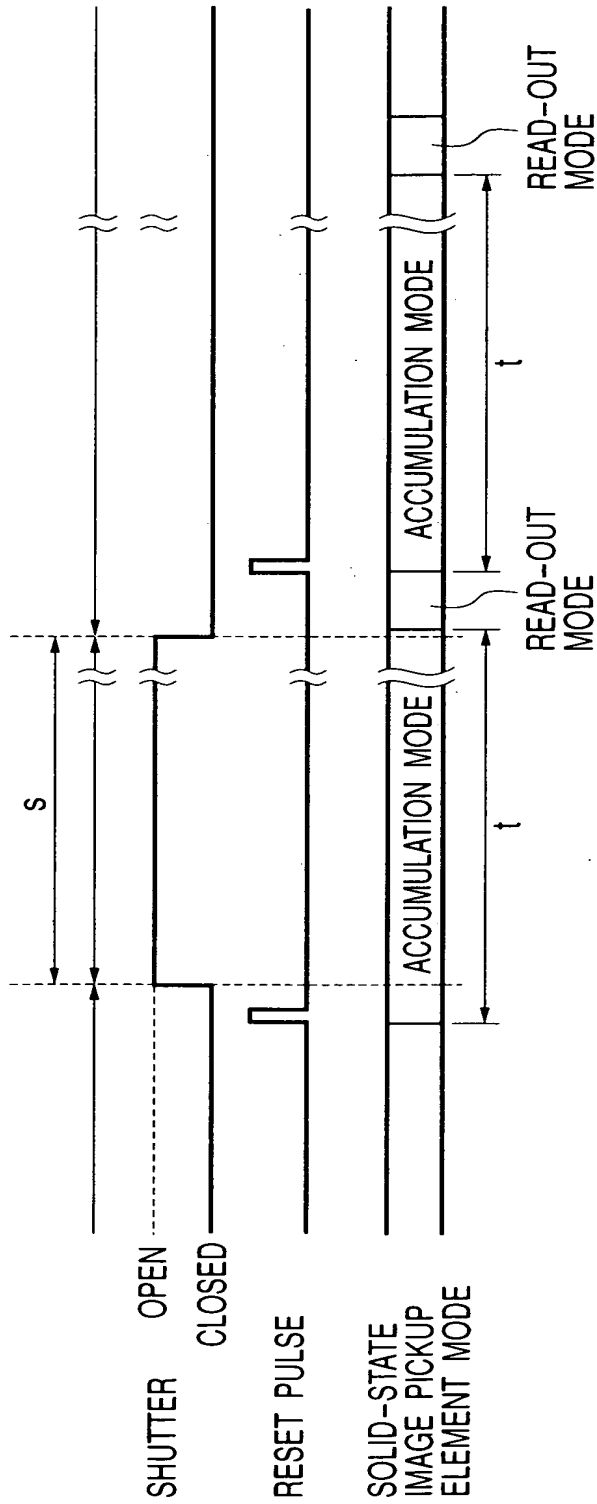


FIG. 5

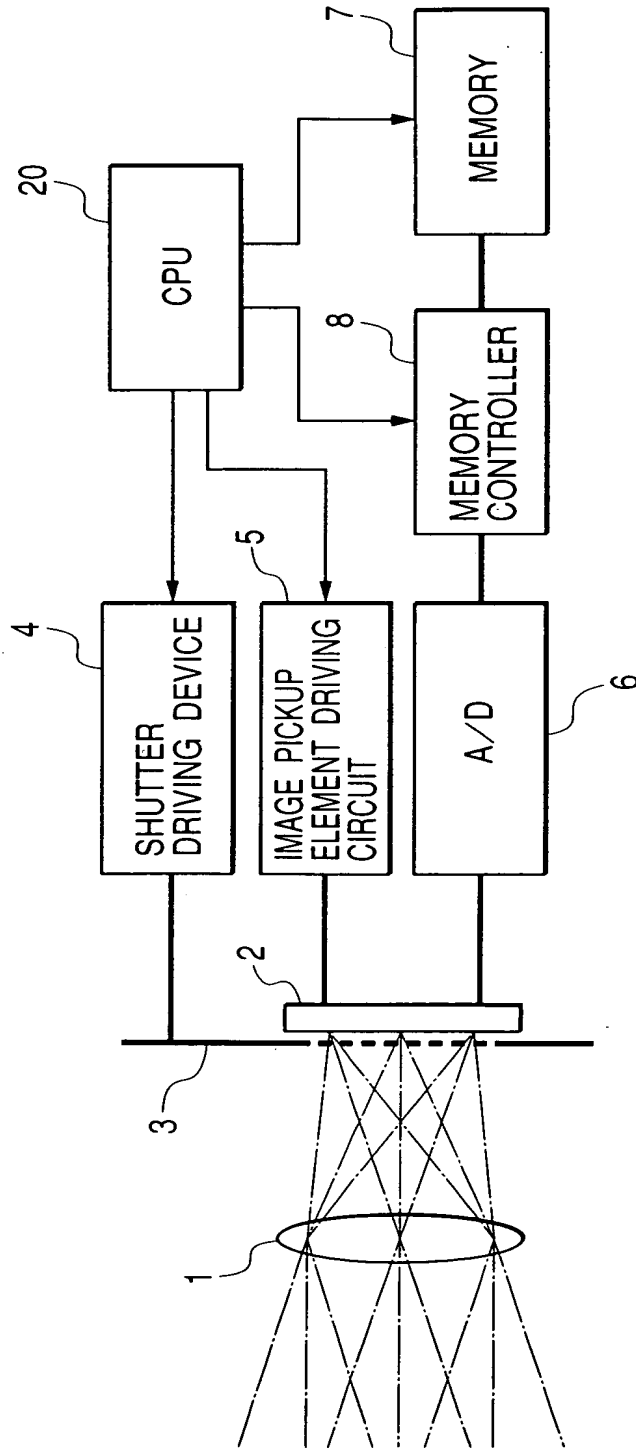


FIG. 6

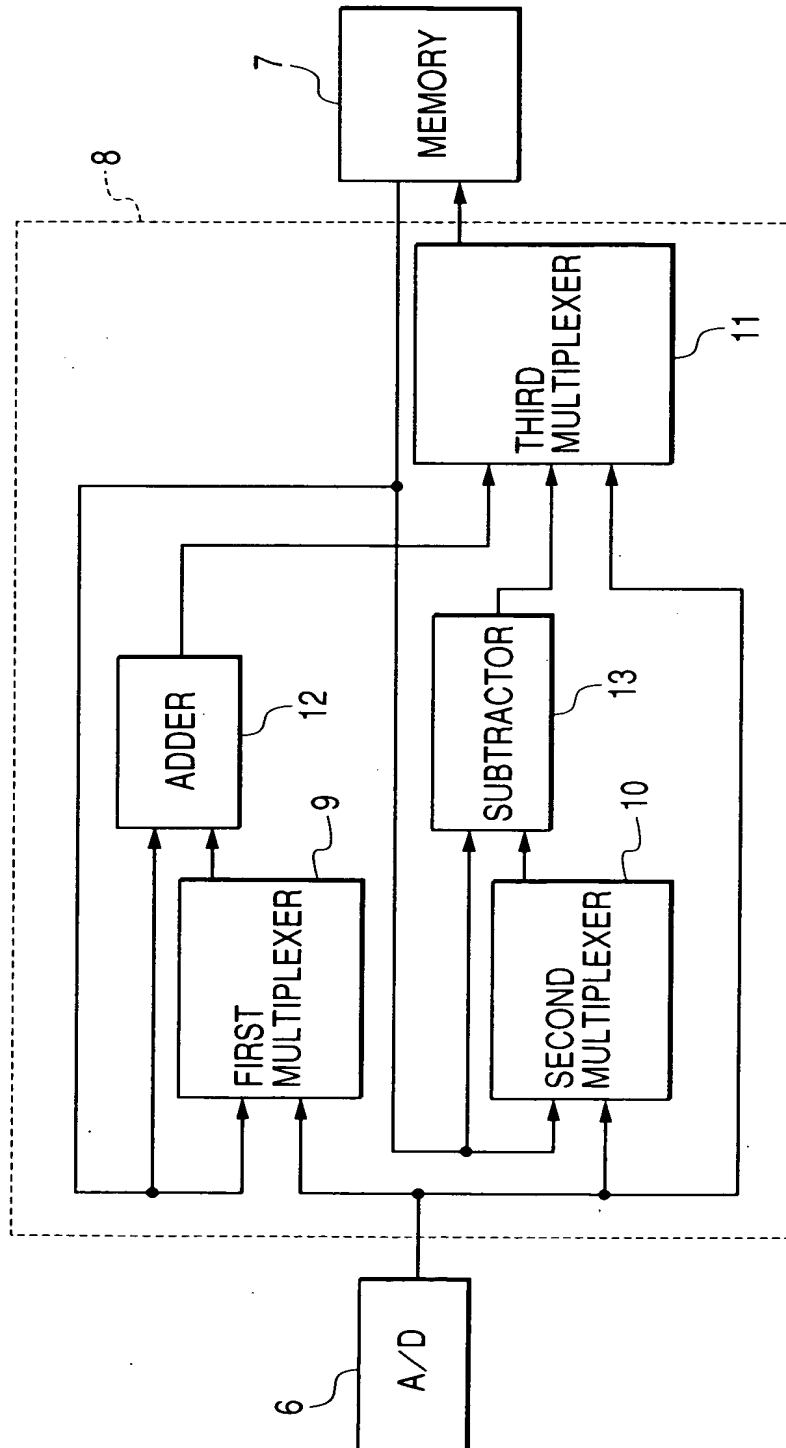


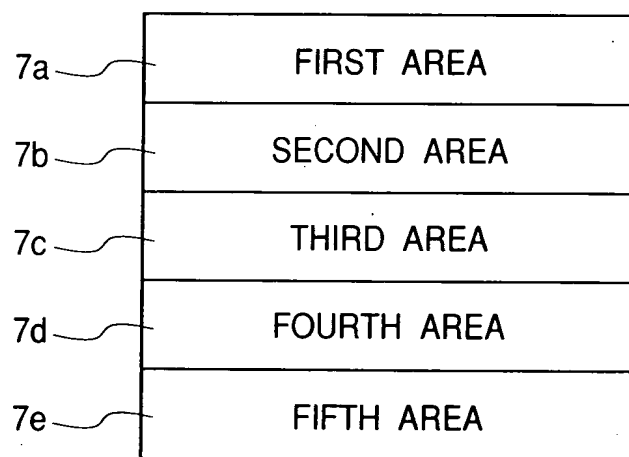
FIG. 7

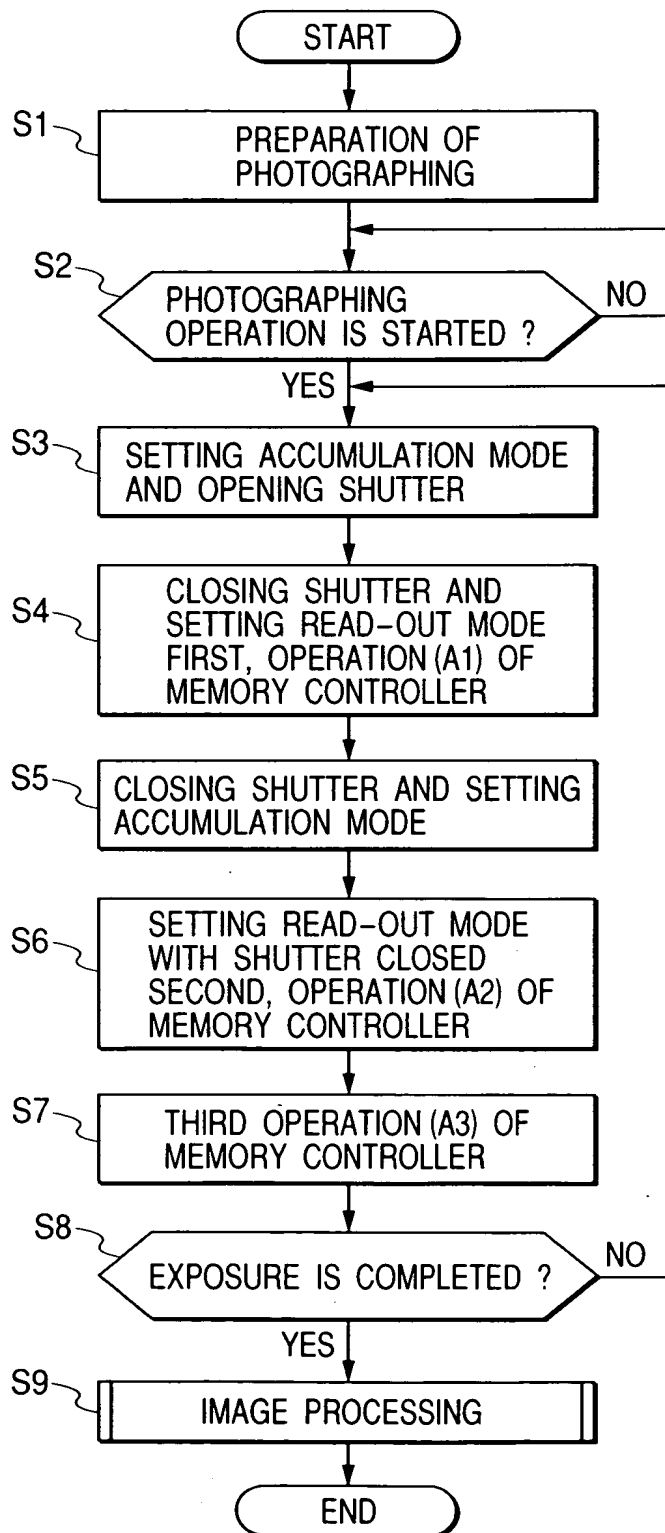
FIG. 8

FIG. 9

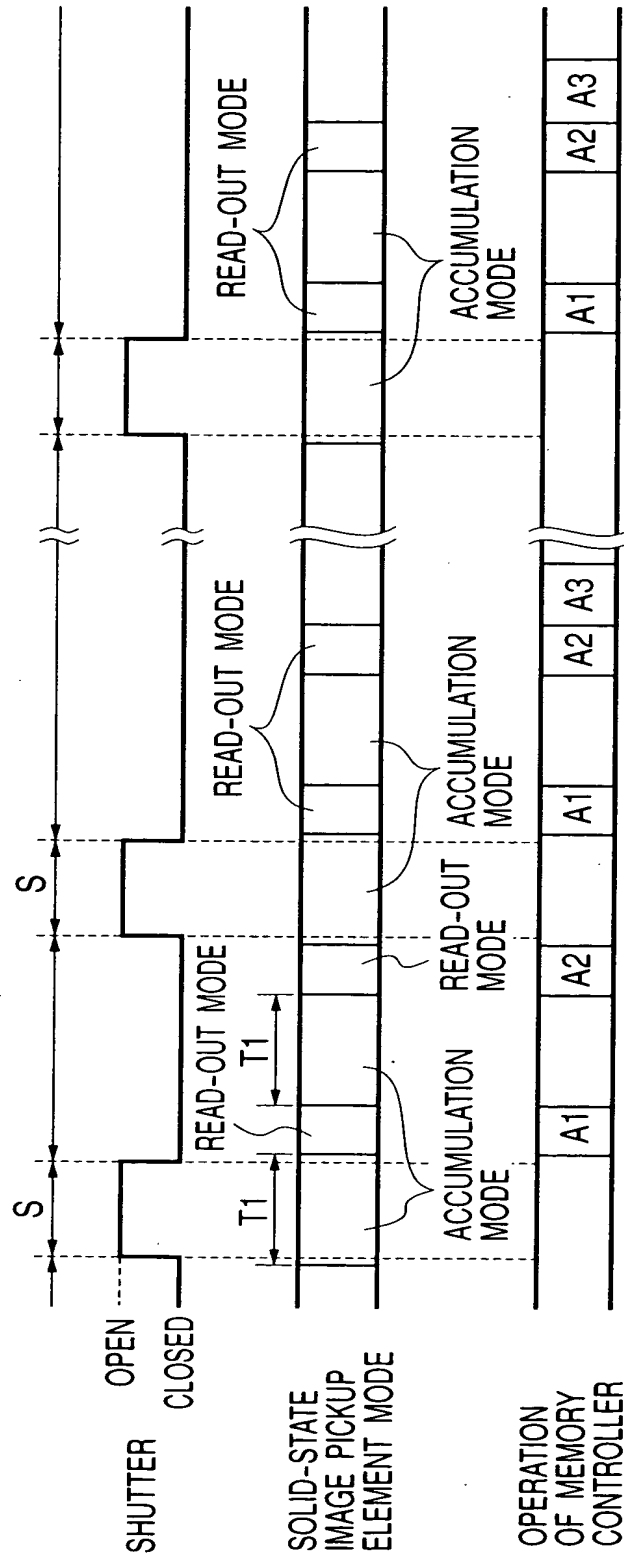


FIG. 10

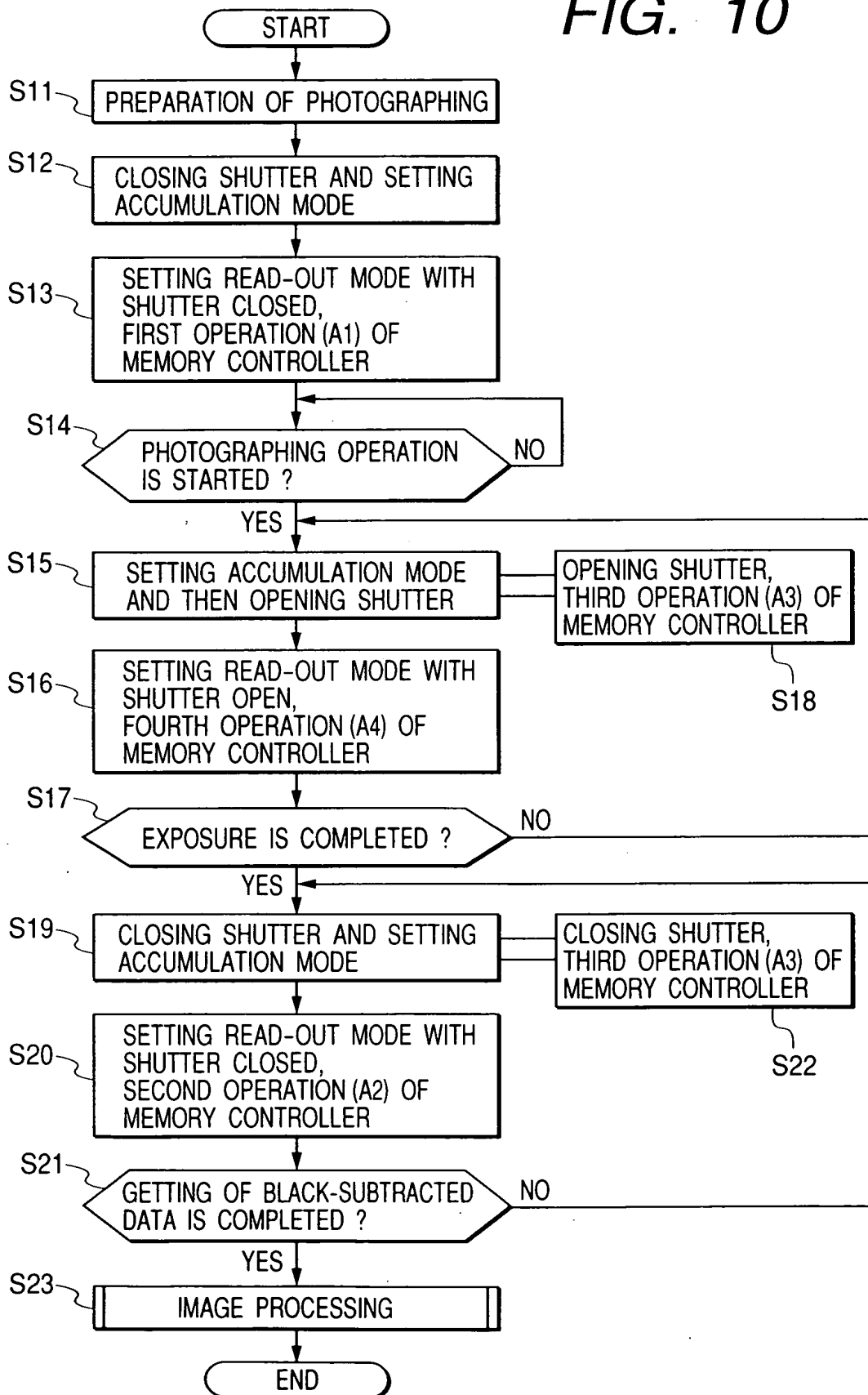


FIG. 11

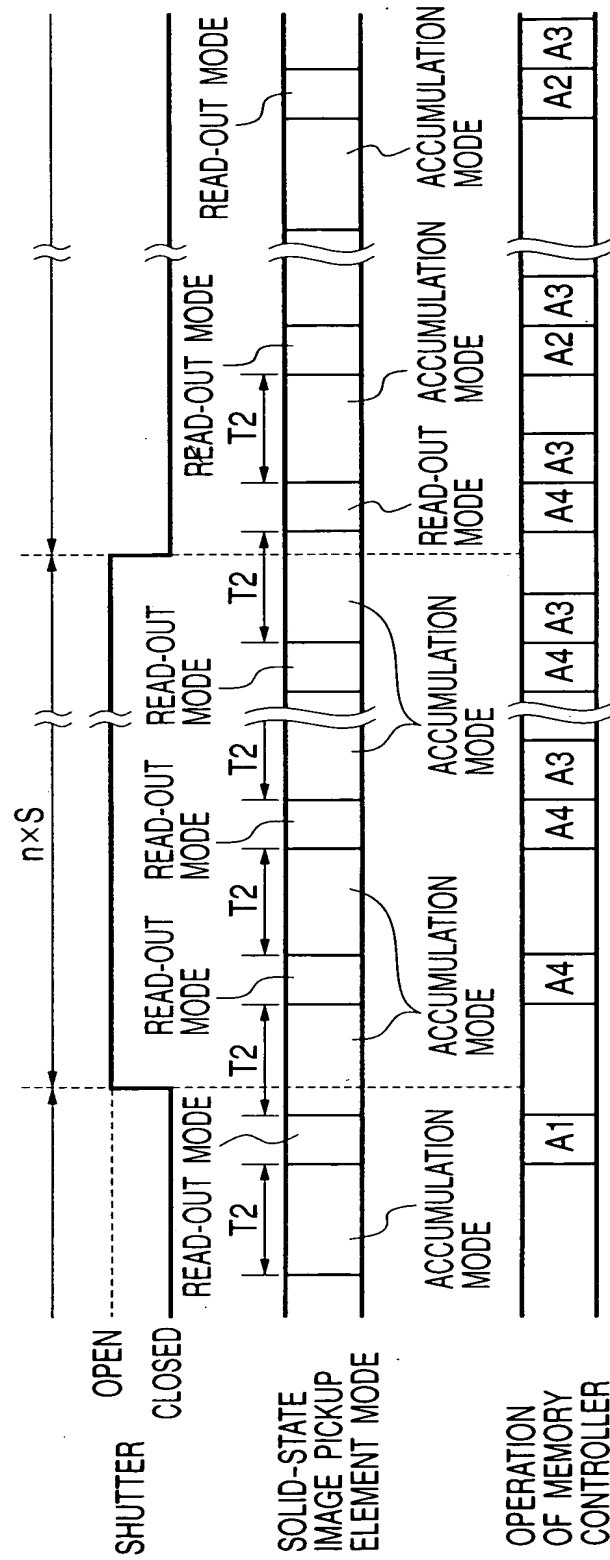


FIG. 13

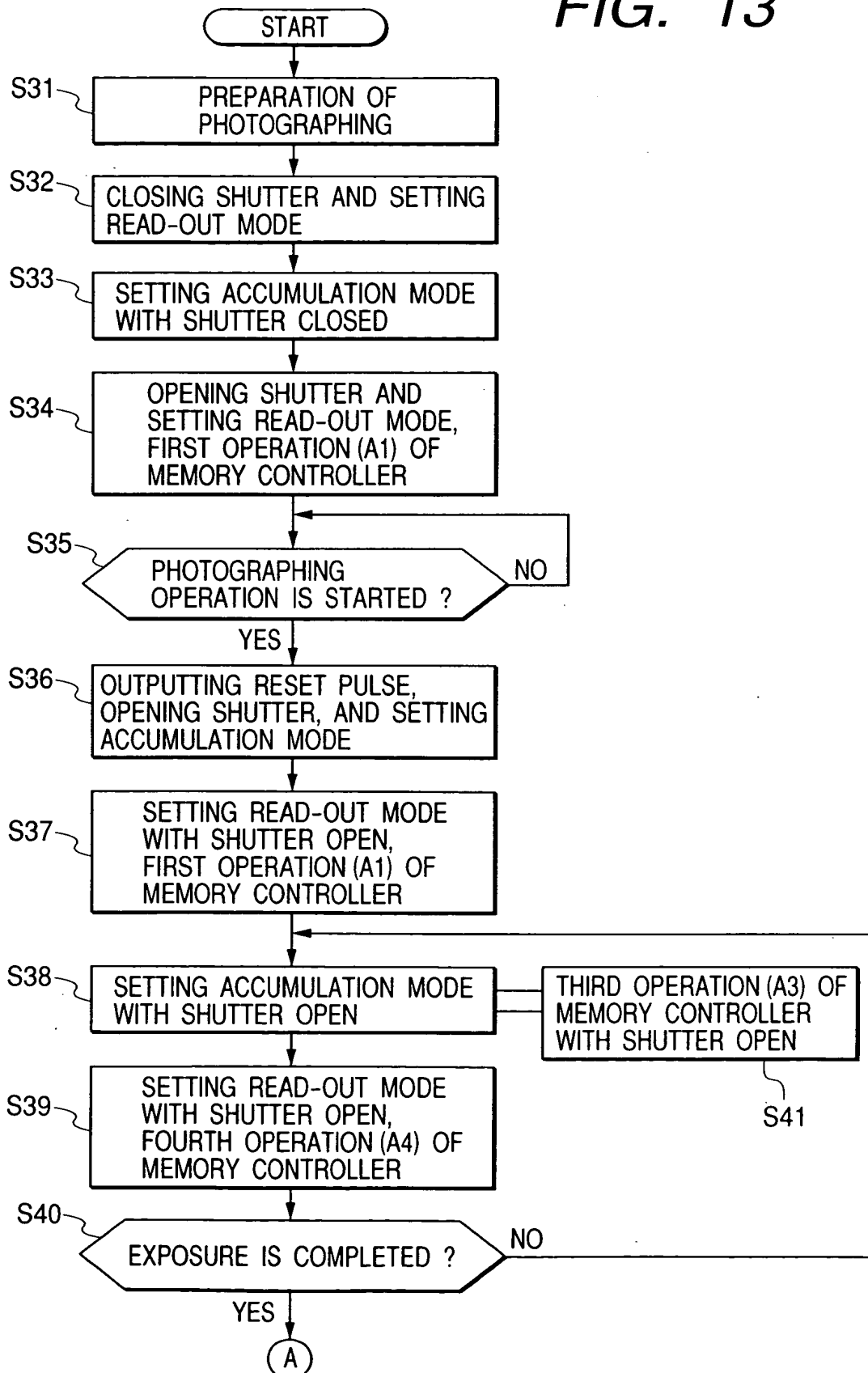


FIG. 14

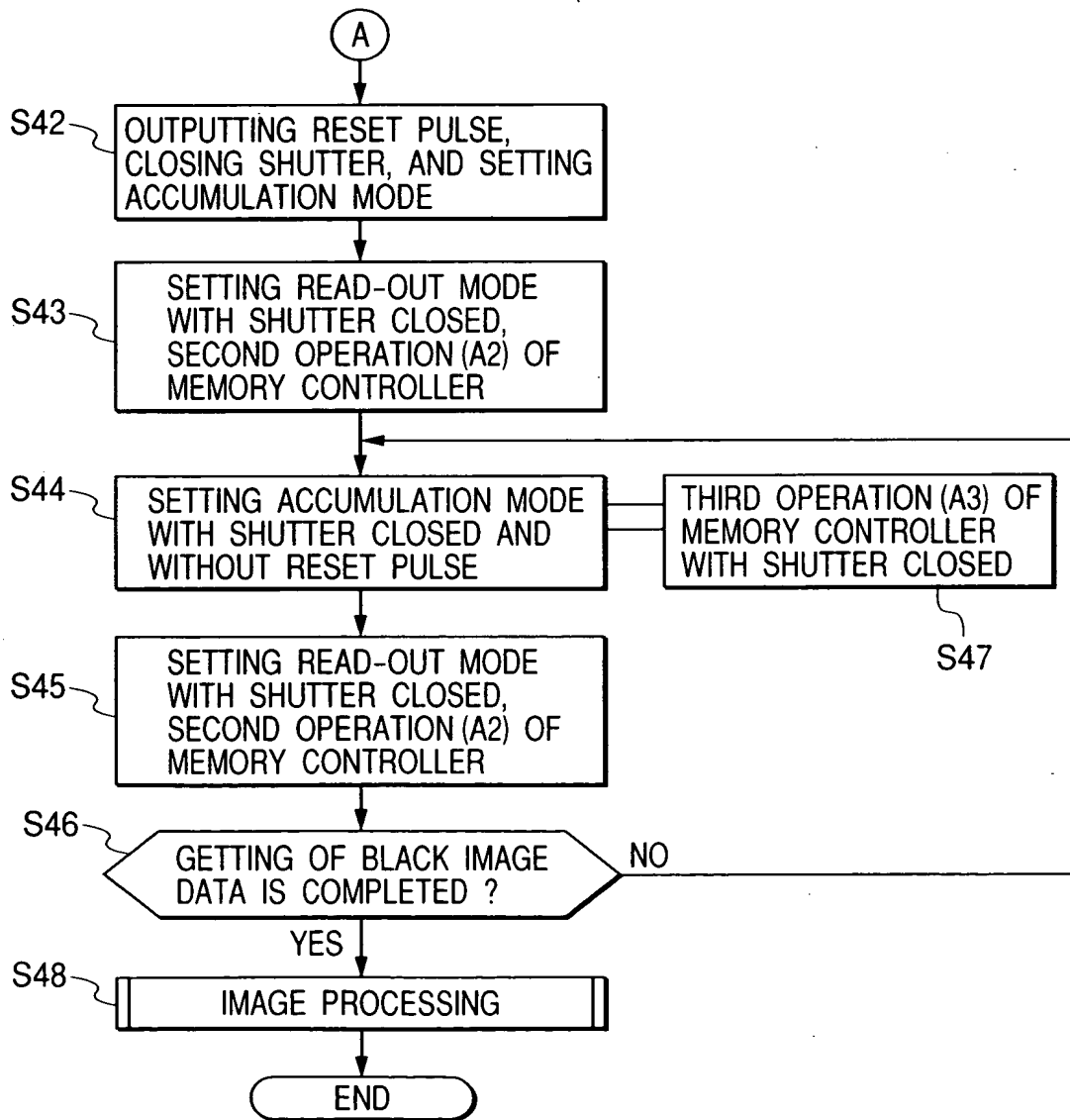


FIG. 15

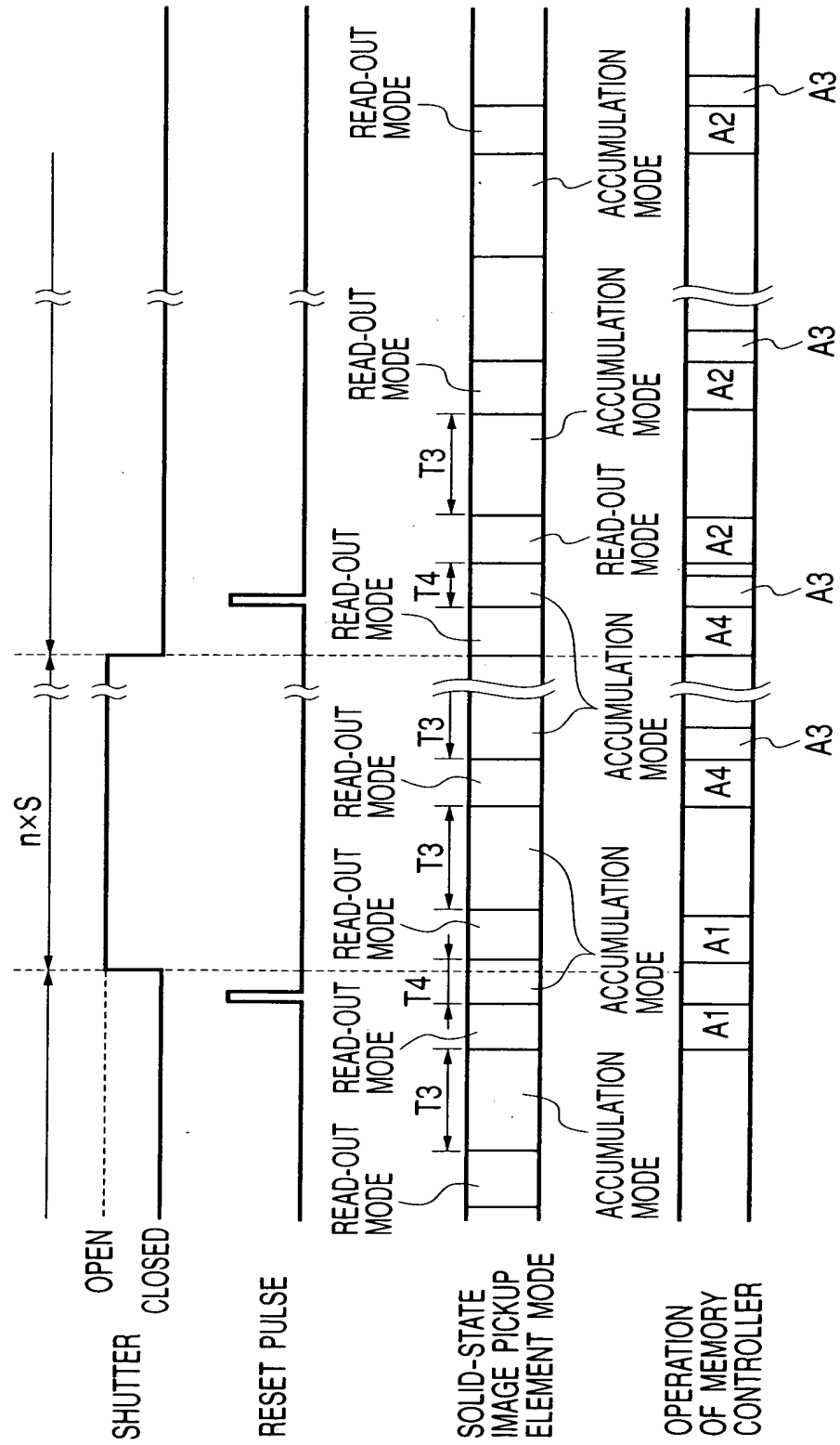


FIG. 16

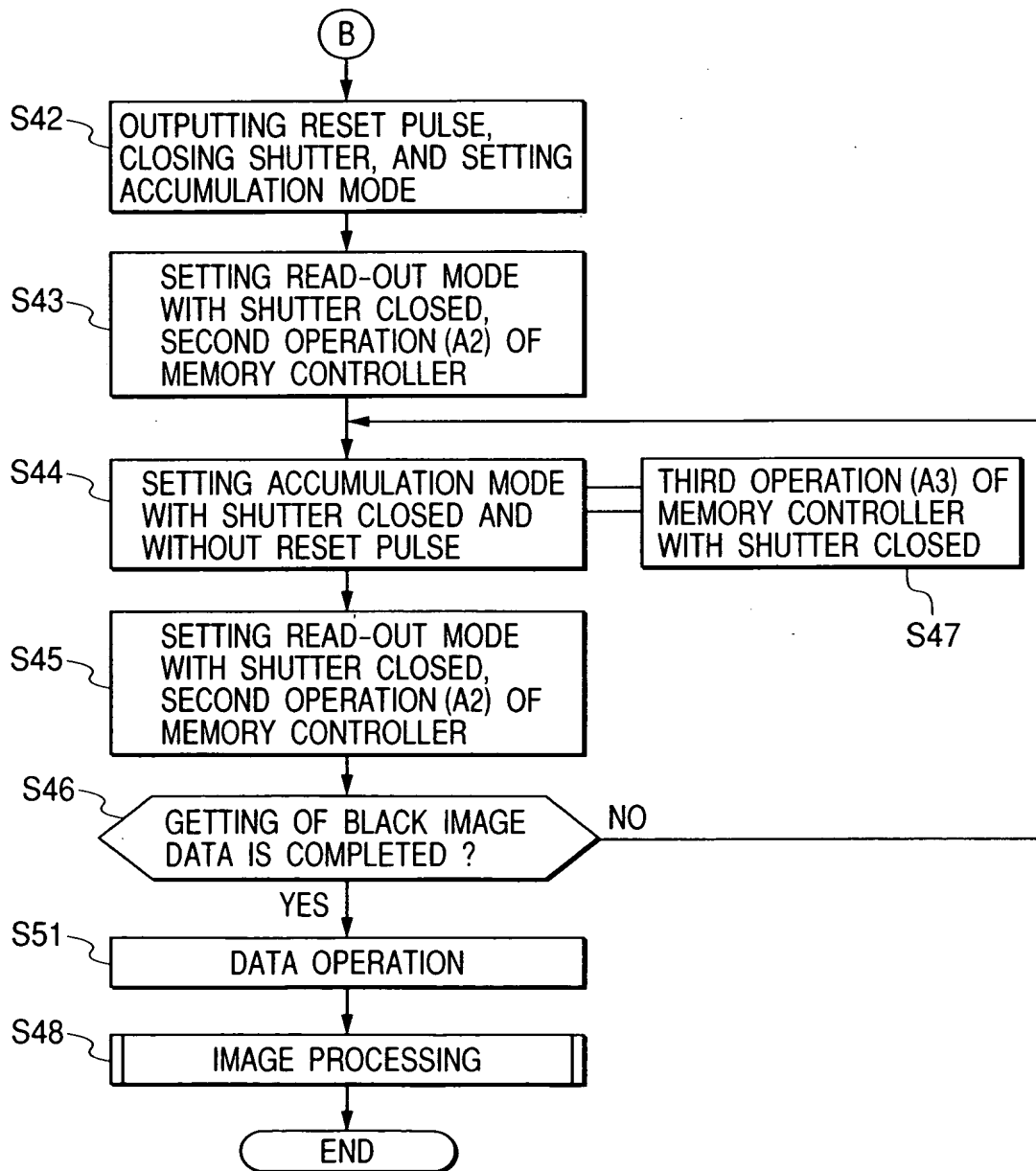


FIG. 17

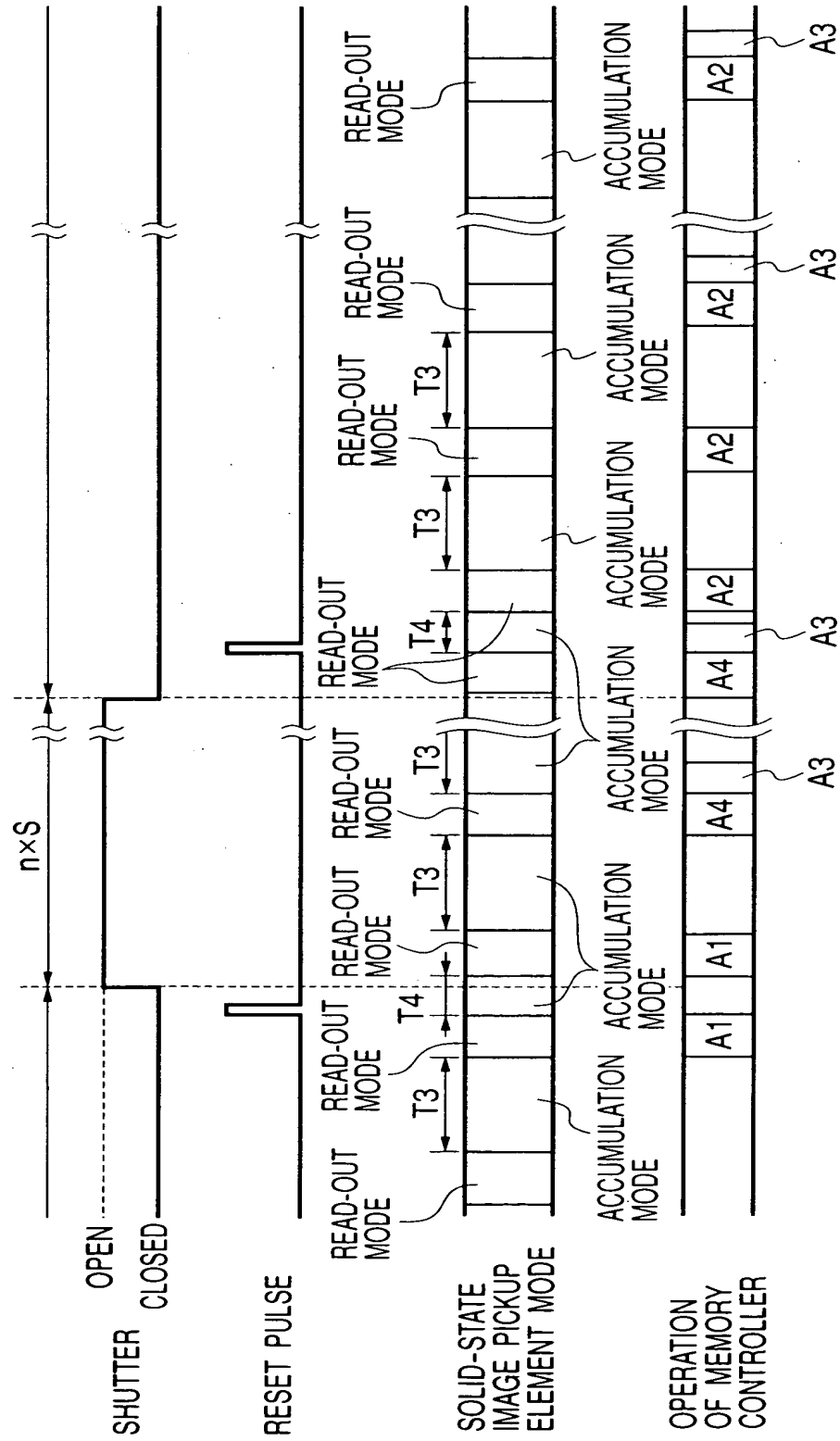


FIG. 18

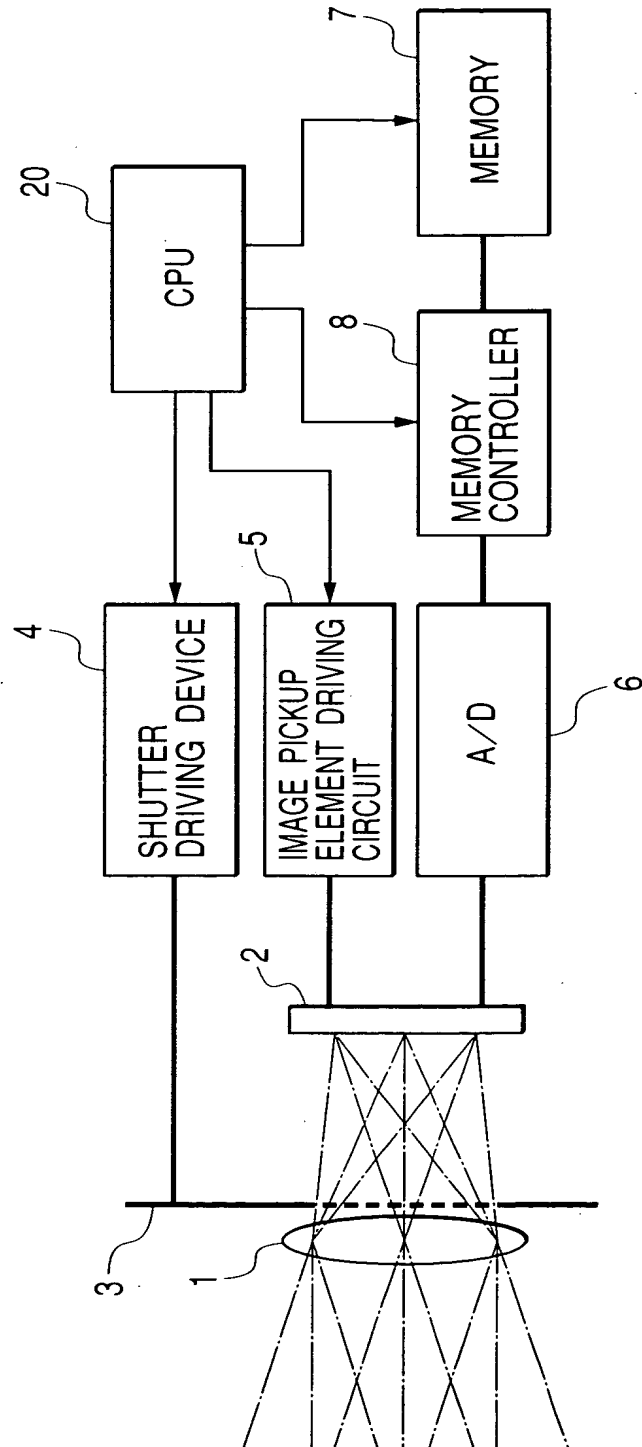


FIG. 19

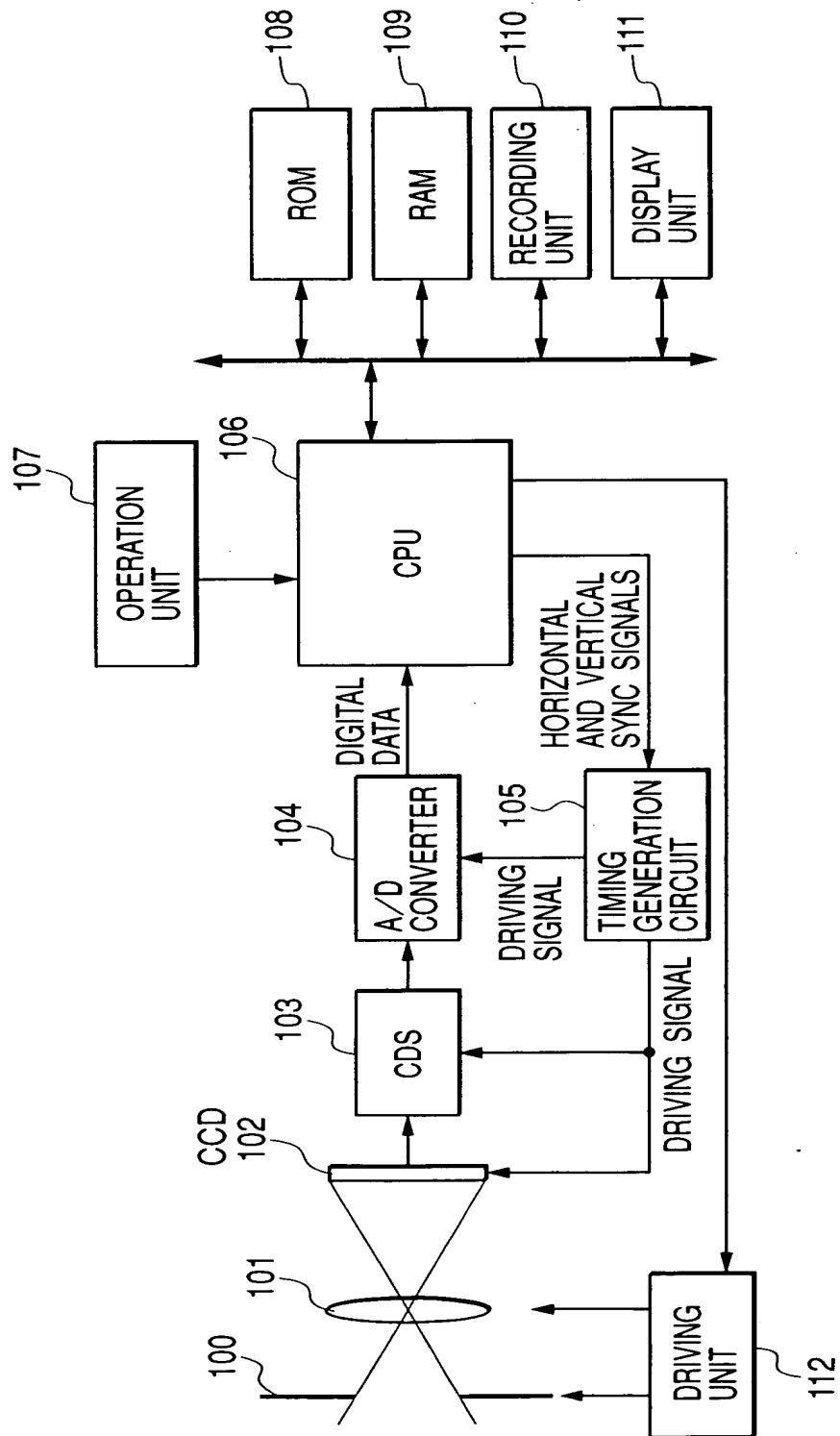


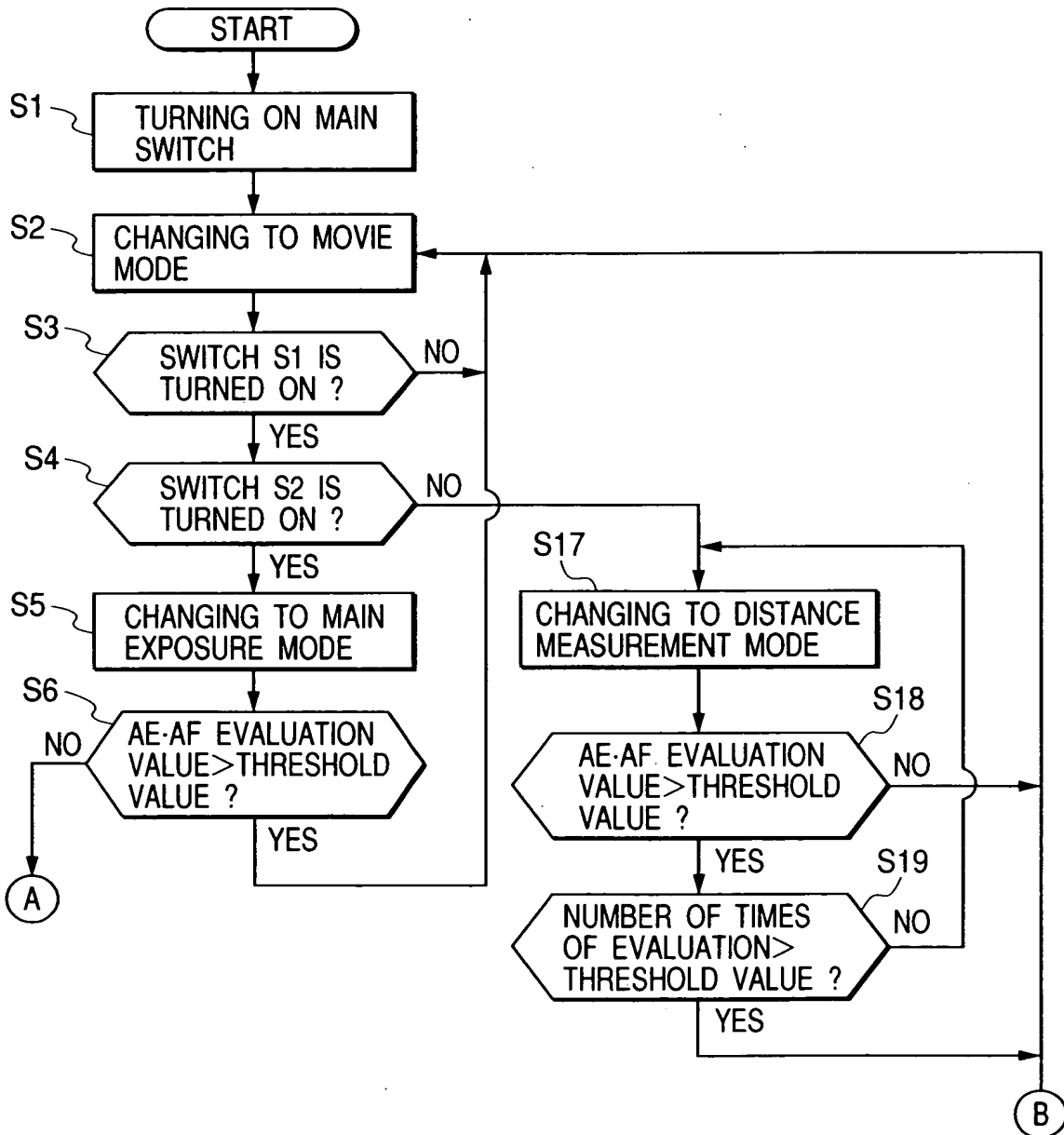
FIG. 20

FIG. 21

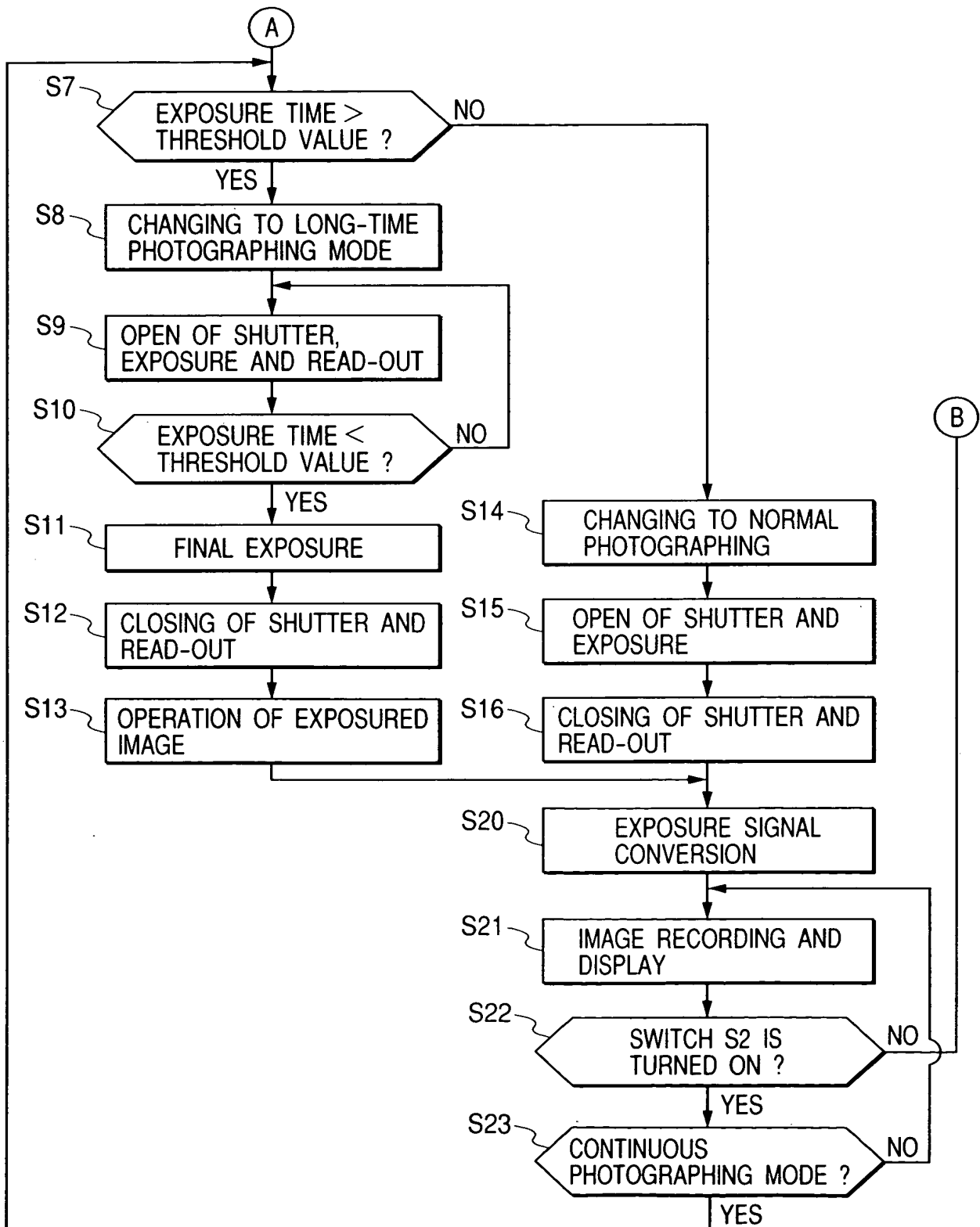


FIG. 22

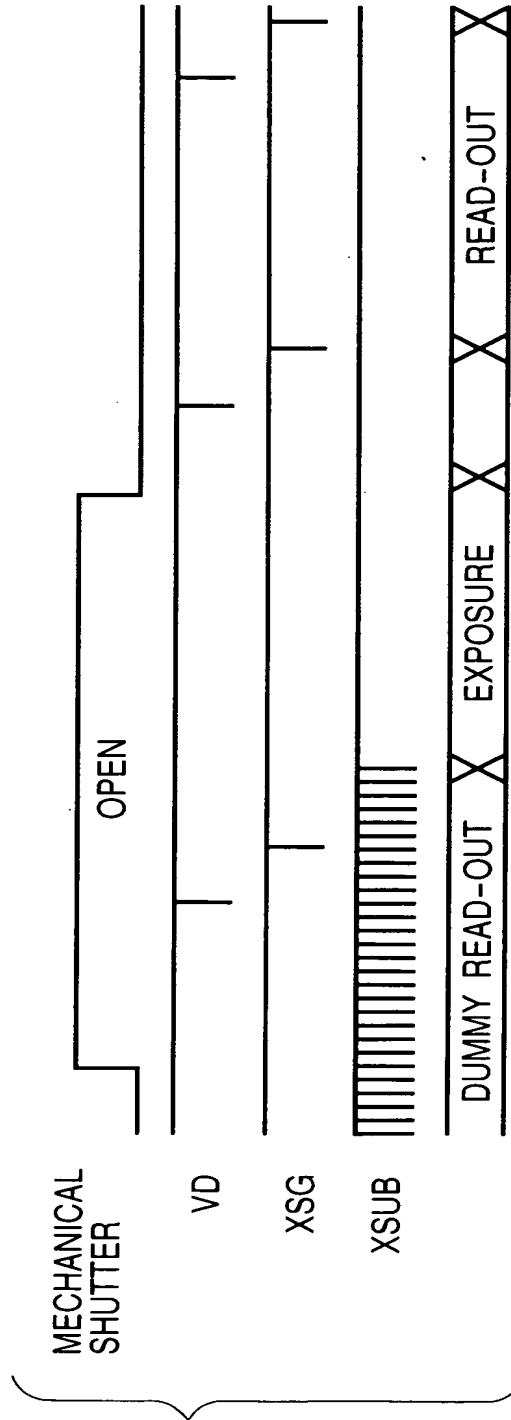


FIG. 23

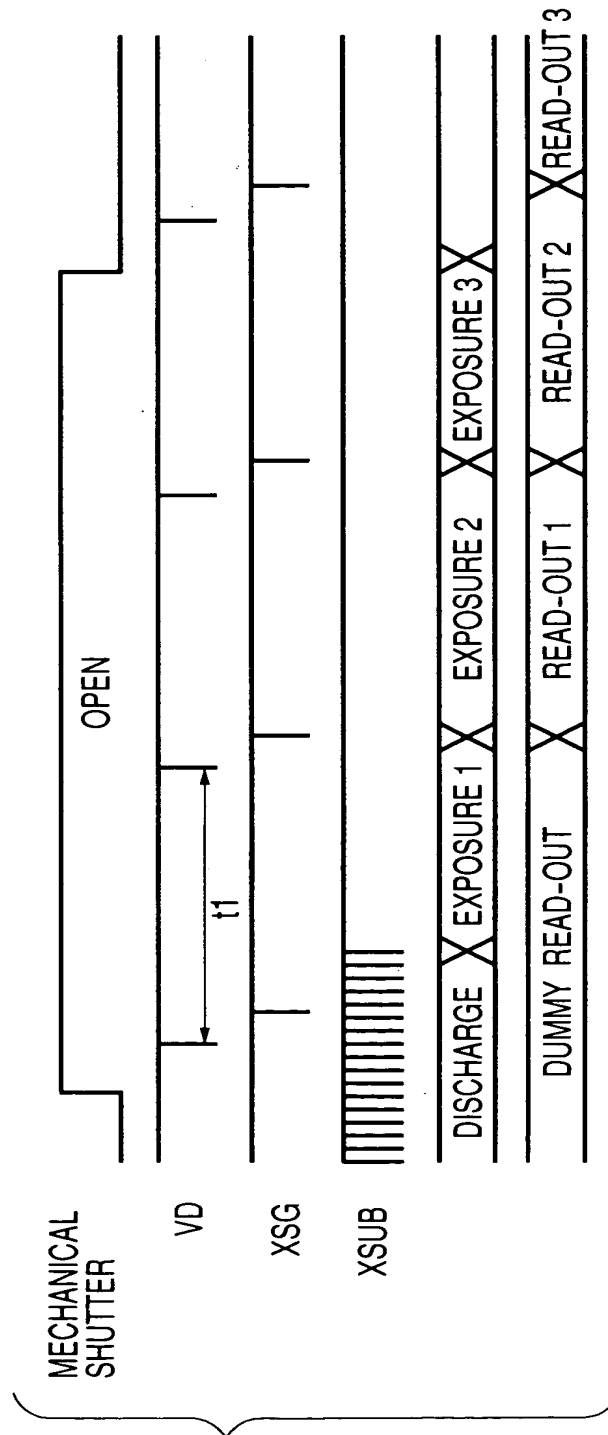
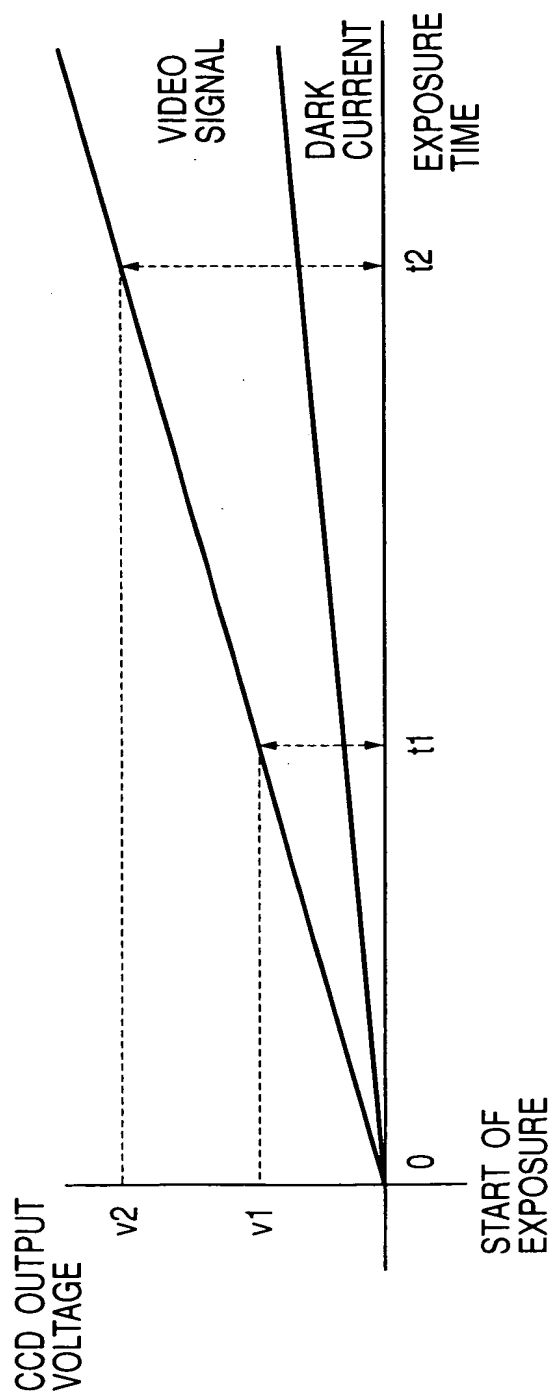


FIG. 24



The diagram illustrates the timing sequence for the CCD system, divided into four main sections: EXPOSURE, READ-OUT, and DISPLAY. The timing is defined by a period t_1 .

VD (Vertical Drive): Shows a series of pulses corresponding to the vertical clock signal.

XSG (X-ray Signal Generator): Shows a series of pulses corresponding to the X-ray signal.

XSUB (X-ray Substrate): Shows a series of pulses corresponding to the X-ray substrate signal.

CCD (Charge-Coupled Device): Shows the sequence of exposures and read-outs. The sequence is as follows:

- EXPOSURE 1-1, EXPOSURE 1-2, EXPOSURE 1-3, EXPOSURE 1-4
- READ-OUT 1-1, READ-OUT 1-2, READ-OUT 1-3, READ-OUT 1-4
- EXPOSURE 2-1, EXPOSURE 2-2, EXPOSURE 2-3, EXPOSURE 2-4
- READ-OUT 2-1, READ-OUT 2-2, READ-OUT 2-3, READ-OUT 2-4

RAM (Random Access Memory): Shows the sequence of read-outs and displays. The sequence is as follows:

- READ-OUT 0-1, READ-OUT 0-2, READ-OUT 0-3, READ-OUT 0-4
- READ-OUT 1-1, READ-OUT 1-2, READ-OUT 1-3, READ-OUT 1-4
- READ-OUT 2-1, READ-OUT 2-2, READ-OUT 2-3, READ-OUT 2-4
- READ-OUT 3-1, READ-OUT 3-2, READ-OUT 3-3, READ-OUT 3-4

DISPLAY UNIT: Shows the sequence of displays. The sequence is as follows:

- DISPLAY 0, DISPLAY 0, DISPLAY 0, DISPLAY 0
- DISPLAY 1, DISPLAY 1, DISPLAY 1, DISPLAY 1

FIG. 26

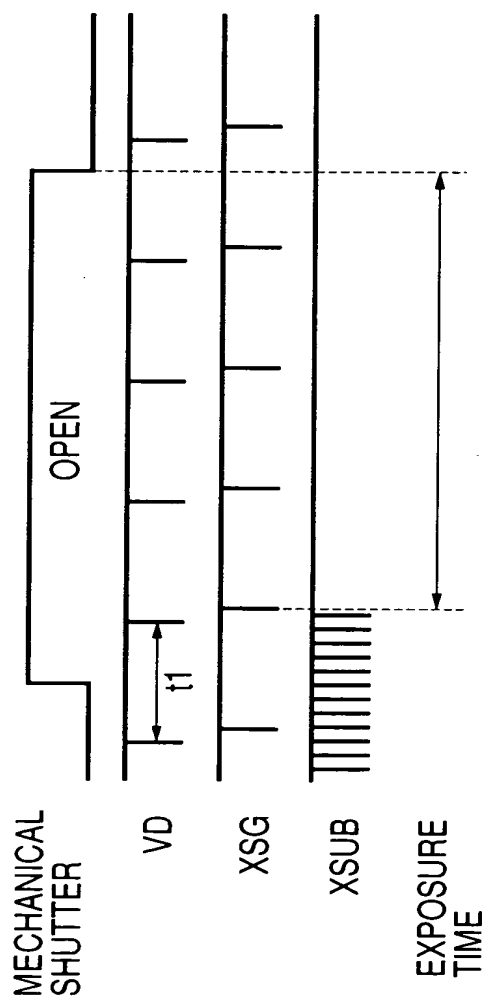


FIG. 27

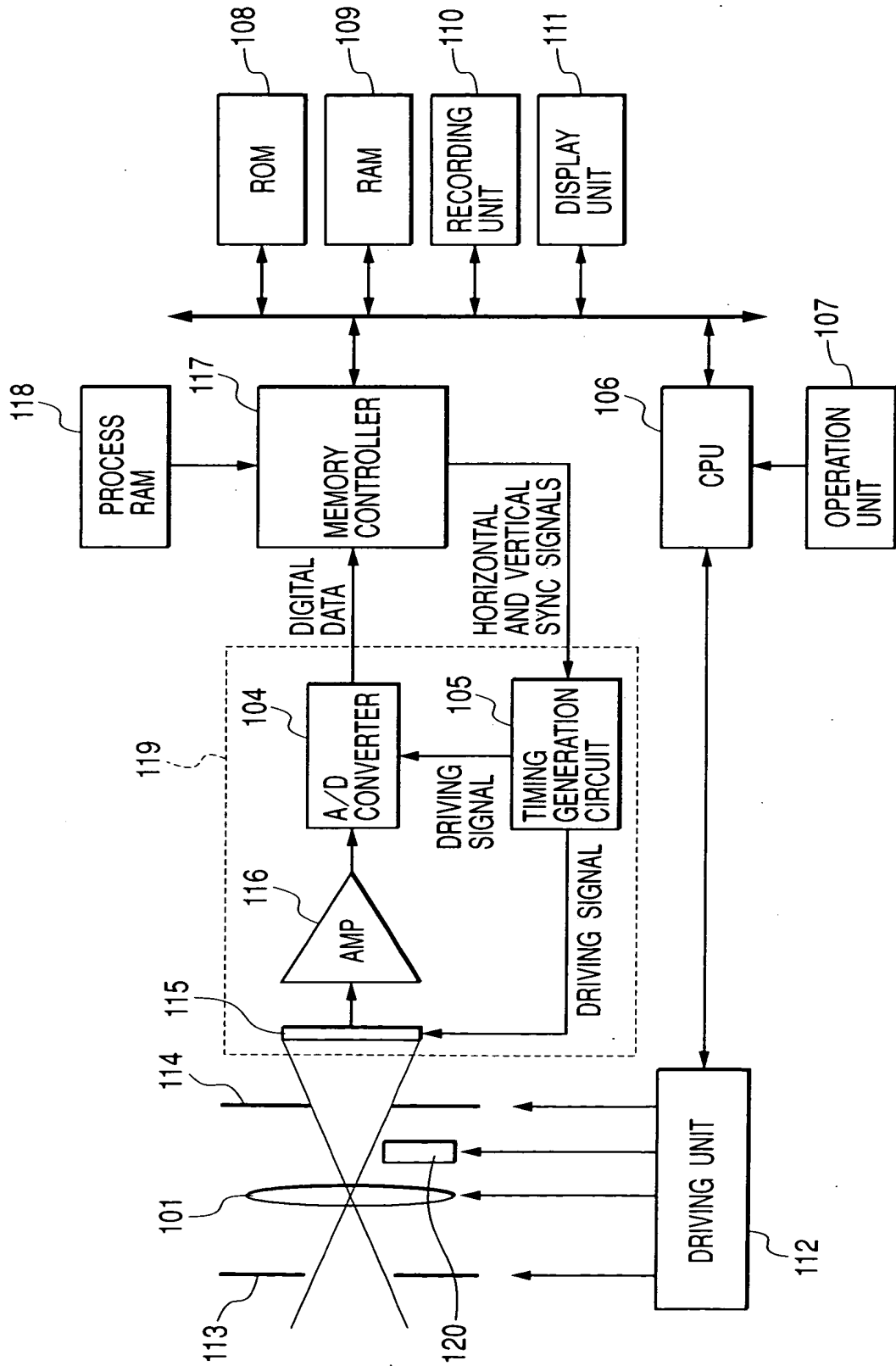


FIG. 28

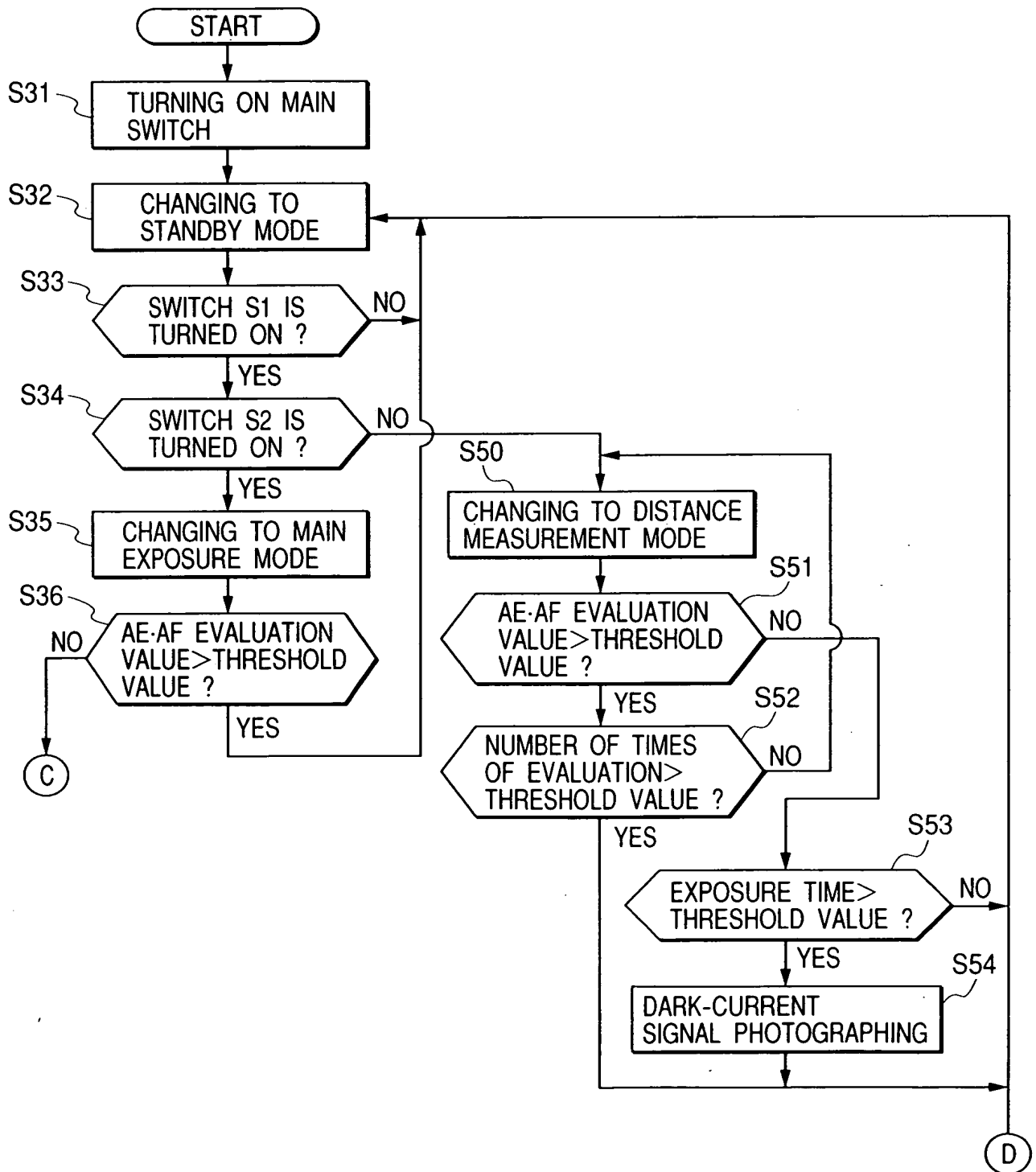


FIG. 29

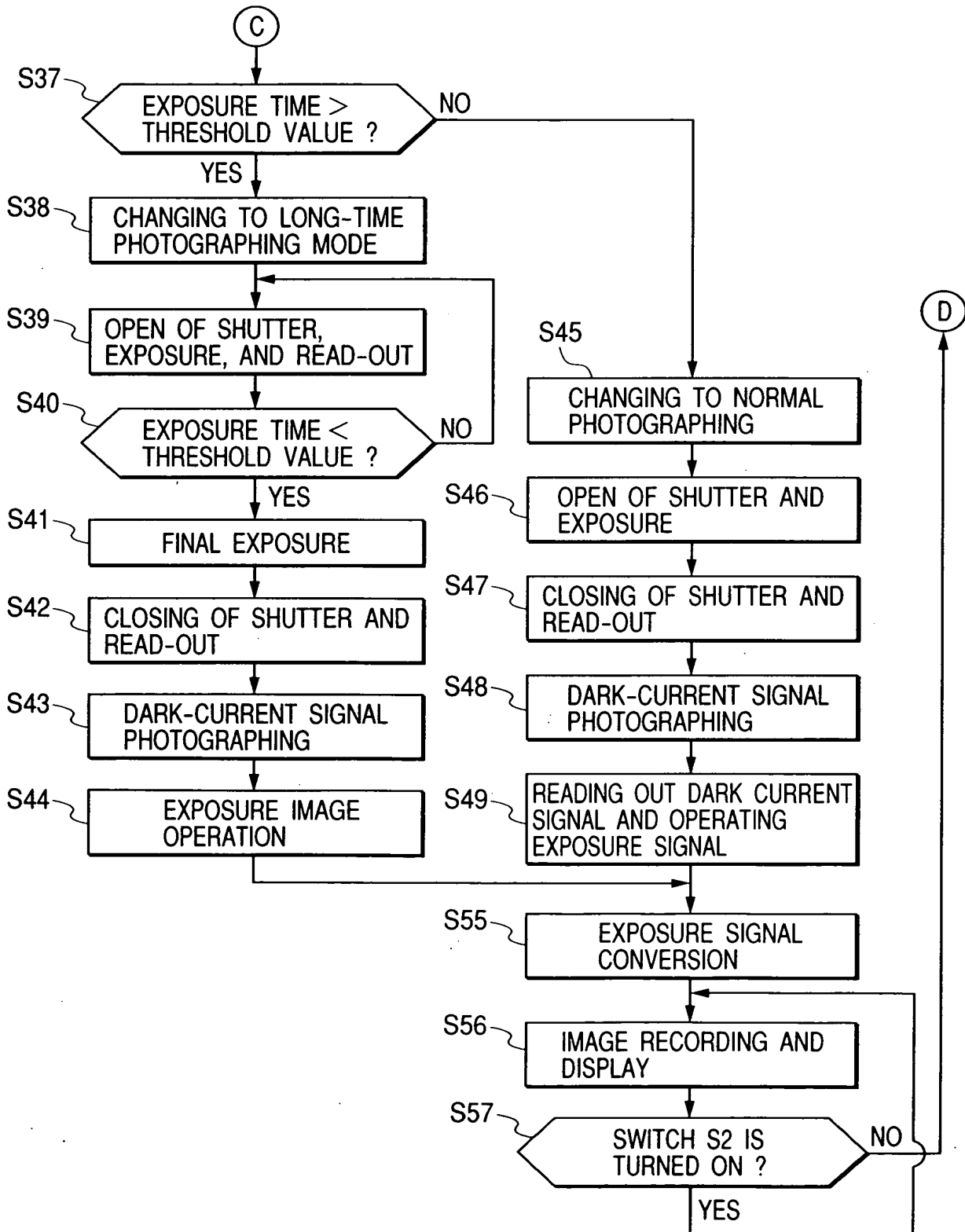


FIG. 30

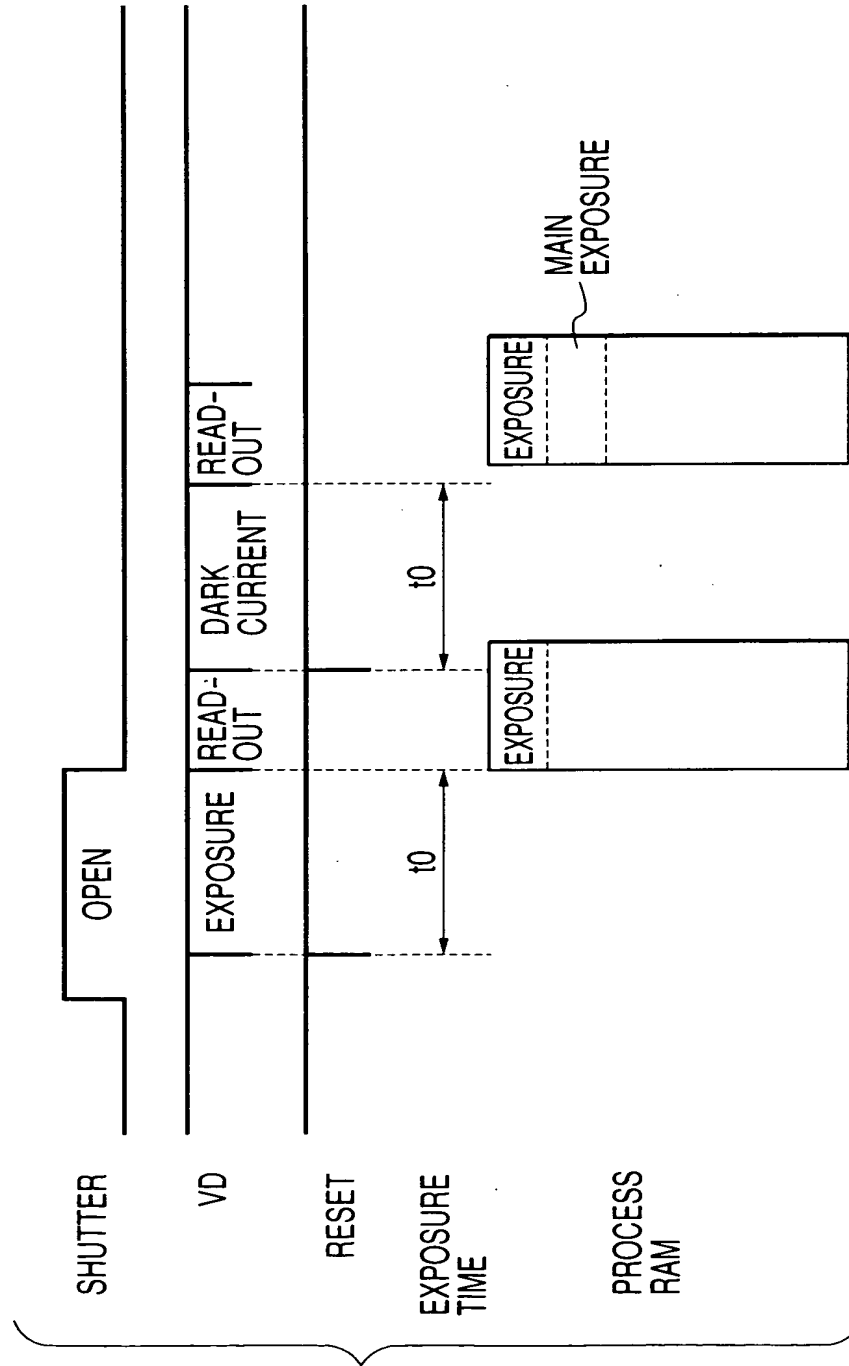


FIG. 31

